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RECENT LITERATURE.

Chamberlain's Canadian Birds.*—This is not among the least of recent indications of activity of Canadian workers. It is more extensive in its scope than Mr. McIlwraith's treatise, including a systematic annotated list of all the birds of North America, north of the United States and British Boundary, excepting Alaska. Considerably more than *one-half* of North American Birds are found within these broad limits, and Mr. Chamberlain has occasion to treat 556 species. These are arranged and named according to the A. O. U. Code and Check-List, and quite fully annotated from all the information available to the author, so far as their geographical distribution is concerned. Without any other biographical matter, it makes a handsome volume of convenient size, invaluable for ready reference. In paper and typography, it is decidedly the best-looking bird-book that has reached us from 'over the line,' though not quite free from misprints, and by some oversight repeatedly giving generic names with a lower-case initial letter. But these are trifling defects, of no weight in estimating the value of the treatise. It at once takes a place of its own, distinct from Mr. McIlwraith's; and the two together very fairly represent what Canada has to offer us at present in respect of ornithology.

In his preface Mr. Chamberlain takes occasion to pointedly comment upon the backwardness in coming forward of the Canadian authorities in the matter of ornithology. His strictures should have great weight because they are simply true, and because they are said by one who has earned the right to speak by his own talents, industry and enterprise. We heartily welcome the successful outcome of the author's researches thus far, and wish him all favorable conditions for their further prosecution.—E. C.

Seebohm's 'Geographical Distribution of the Charadriidæ.'—Mr. Seebohm's book on the 'Charadriidæ,'† or 'Plovers, Sandpipers, Snipes, and their Allies,' is a large quarto, illustrated with twenty-one beautifully colored plates of species hitherto unfigured or badly figured; in typographical execution it is almost faultless, forming altogether a sumptuous specimen of book-making. The text abounds in beautiful cuts, the greater part being head-pieces or illustrations of structural details.

* A Catalogue | of | Canadian Birds, | with | Notes on the Distribution of the Species. | By | Montague Chamberlain. | — | Saint John, N. B. | J & A. McMillan, 98 Prince William Street. | 1887. | 1 vol. cloth, sm. 4to paper, 8vo typebed, title and pp. i—vi, 1 l., 1-143.

† The | Geographical Distribution | of the Family | Charadriidæ | or the | Plovers, Sandpipers, Snipes, and their Allies. | By | Henry Seebohm | author of "Siberia in Europe," "Siberia in Asia," "Catalogue of the Birds in the British Museum" (Vol. 5), | "A history of British Birds, with coloured Illustrations of their Eggs," etc. | [Vignette—group of Avocets.] London: | Henry Sothorn & Co., 136 Strand, W. C. and 36 Piccadilly, W.; | Manchester, 49, Cross Street.—No date. 4to. pp. xxix, 524, pll. xxi, numerous cuts in the text. On the back-title of the cover is the date, 1888.

He states that the work is "not a monograph," being limited to the treatment of two topics, the geographical distribution of the species and their mutual relationship, one of his chief objects being to point out what appeared to him "to be errors in their classification." Judged from this latter standpoint, we fear Mr. Seebohm's labors will not be received with much favor by the generality of his contemporaries. He further says the work "treats only of the classification of the family Charadriidæ into sub-families, genera, subgenera, species, and sub-species. I propose for the most part to confine the descriptions of each of these groups of individuals to those characters which are diagnostic, and to make the geographical distribution of each species the *pièce de résistance* of my bill of fare" (p. 51).

As will be seen by the title, Mr. Seebohm's 'family Charadriidæ' includes birds modern ornithologists usually arrange in several families; while his classification of the genera presents strikingly original allocations, the classification here adopted being essentially that followed in the same author's 'History of British Birds.' He sets out with excellent intentions, and his work, aside from matters of nomenclature and classification, is based on sound principles and broad philosophic views. He not only nominally accepts the doctrine of evolution, but adopts it unreservedly as the basis of his work, accepting, without flinching, its "inevitable consequences." He recognizes with unstinted praise the "progressive tendency of thought" among American ornithologists, with whom "the recognition of sub-species is as much a matter of course as the admission that many species, even amongst those whose geographical distribution is very wide, show no tendency to split up into local races" (p. v). He accepts the tests we long since adopted on this side the water as the criterion for species and subspecies, namely, the non-intergradation of the former, and the intergradation of the latter. For subspecies, however, he recognizes what he terms a geographical boundary. "Whatever individual variation be found within the range of a species, if it be not also capable of being defined geographically I do not regard it of subspecific value" (p. v.). He reiterates his well-known views on the subject of what are and what are not generic characters;* but the results to which they give rise will not, we fear, gain for his views very general acceptance. In his somewhat extended 'Preface' he announces or summarizes views he presents at greater length in special chapters. Following a very full table of 'Contents' is a 'Systematic Index and Diagnosis (pp. xv-xxviii), in which he gives the 'diagnostic characters' of his groups, from subfamily to subspecies, and in which an attempt is made to indicate the strictly distinctive features of each. 'Chapter I' is devoted to the 'Classification of Birds,' which he arranges in five orders, namely: I. Anseriformes ("Owls, Eagles, Herons, Flamingoes, Ducks, Cormorants, and their allies"). II. Cuculiformes ("Goatsuckers, Cuckoos, Woodpeckers, Parrots, Kingfishers, Hornbills, Rollers, Toucans, Jacamars, Pigeons, and their allies"). III. Passeriformes ("Passerine Birds, Humming-Birds, Swifts, and their allies"). IV. Charadriiformes ("Penguins, Divers,

* On this point, see Bull. Nutt. Orn. Club, VIII, 1883, p. 100.

Grebes, Auks, Gulls, Petrels, Plovers, Snipes, Cranes, Rails, Pheasants, Tinamous, and their allies"). V. *Struthioformes* ("Ostriches, Cassowaries, Apteryx, and their allies"). The *Charadriiformes* are divided into seven suborders, of which the fourth, or '*Limicolæ*,' is in turn divided into eight families, as follows: *Pteroclidæ*, *Turnicidæ*, *Thinocoridæ*, *Dromadidæ*, *Charadriidæ*, *Otididæ*, *Parridæ*, and *Chionidæ*; the '*Charadriidæ*,' (= *Limicolæ*, 'auct. plur.') with the limits above indicated, forming the subject of the present work. He considers it "absurd" to create orders for fossil birds, as some ornithologists have done, apparently because we know so few "links" of the "endless chain!"

Passing for the present this certainly very 'original' scheme of classification without further comment, we come to 'Chapter II. The Evolution of Birds.' This chapter (pp. 1-15) we commend to the reader as a thoroughly philosophic and sensible presentation of the subject, — one of the best, from our point of view, we have ever seen, and to nearly every line of which we give hearty assent. It is a terse and able discussion of many moot points, which Mr. Seebohm, we do not hesitate to say, has treated in a masterly way. 'Chapter III. The Differentiation of Species' (pp. 16-24), is in the same line, and inspires our equally hearty indorsement. In fact, we have long held substantially the views here so well expressed and defended, and on many of the points have, on different occasions, written to the same effect, particularly in relation to so-called 'natural selection.' There is much in these two chapters we would gladly quote did space permit.

'Chapter IV. The Glacial Epoch' (pp. 25-32), is devoted to an explanation of the origin, dispersion, and present geographical distribution of the various forms of the '*Charadriidæ*,' through the influence of successive periods of glaciation; in general the views here promulgated have much in their favor. 'Chapter V. Migration' (pp. 33-50) contains much that is instructive and suggestive, though some of his conclusions may be open to question.

'Chapter VI. The Paradise of the *Charadriidæ*' (pp. 51-58) treats at some length of the habits of these birds in their Arctic breeding-grounds, and graphically describes the physical features and the climate of the region, largely from personal experience, where so many of the northern species find their summer home.

'Chapter VII. Zoölogical Regions,' is based entirely upon the birds especially under consideration. The 'Regions'—which "have nothing whatever to do" with "the Zoölogical Regions of Sclater and others,"—three in number, are strictly climatic belts, as follows: First, an 'Arctic Region,' situated between the July isothermals of 60° and 40°. Second, a 'Tropical Region,' limited by the isothermals for July (north of the equator) and January (south of the equator) of 77°. Third, a 'Temperate Region,' divided into two by the last named region — a north Temperate and a south Temperate, the former bounded by the July isothermals of 77° and 60°, and the latter by the corresponding isothermals for January. Were the whole '*suborder Limicolæ*' considered, Mr. Seebohm says "we

should be compelled to recognize an Anarctic Region," which would be characterized by the families Chionidæ and Thinocoridæ, and which "appears to be also the centre of dispersal of two suborders—the Procellariidæ and the Impennes; so that it must be regarded as a very important Region when the distribution of the whole order Charadriiformes is considered." He does not think it necessary, however, to recognize it for the 'Charadriidæ,' since so few species of this group visit it for breeding purposes. A map illustrates the regions recognized.

'Chapter VIII. On Subspecific Forms' (pp. 62-65), is thoroughly in harmony with American notions on this subject, in which Mr. Seebohm rather pointedly contrasts what he terms the "clearheadedness of American ornithologists on this point" with the "conservative views of British ornithologists." "It is only doing scant justice," he says, "to American ornithologists to admit that to them belongs the credit of having for the first time formed a clear conception of the difference between a species and a subspecies, and of having at once recognized the fact in a scientific manner in their nomenclature. . . . The primary truth, the recognition of which in some way or other is of vital importance to a clear understanding of the facts of Zoölogy, is that species in the process of differentiation do exist in considerable numbers. . . . The fact of the existence of species which consist of two or more typical forms which are connected together by an unbroken series of intermediate forms between the geographically separated extremes . . . is the most important ornithological fact which has been discovered during the last half-century. It is a fact which has been clearly recognized by American ornithologists, and its tardy or doubtful recognition by British writers on birds is one of the psychological puzzles that are very difficult to believe, much less to explain" (pp. 64, 65).

Chapters IX-XXX (pp. 66-506), are devoted to the general subject, wherein the 'Charadriidæ,' from 'family' down to subspecies, are treated with special reference to their classification and geographical distribution. His descriptions of the several groups are brief, but are, it is claimed, diagnostic. Keys are provided for the species and genera, which we trust will prove so much more than usually servicable as to warrant the rather sharp criticism our author bestows on the similar attempts of some of his predecessors. His references are generally limited to the citations of synonyms, and to a few works treating specially of the habits and eggs of the species or subspecies, or giving figures of the birds or their eggs. Trinomials are consistently employed, but the law of priority is, as usual with Mr. Seebohm, altogether ignored. There is little formal reference to the 'auctorum plurimorum' rule,* but in the selection of names, particularly for subspecies, he is governed on some occasions by this principle and in others by his personal preferences. A foot-note on page 100, under *Charadrius fulvus americanus*, affords a case in point: "Of the three names, *americanus*, *dominicus*, and *virginicus* [applied to the American Golden Plover], the first is the most expressive, the second is the oldest,

* See Auk, II, 1885, p. 89.

and the third has been most used. I adopt the first, on the ground that in accepting a trinomial nomenclature as a necessary evil an ornithologist has a perfect right to dictate the terms on which he accepts it. The only way to prevent the indefinite use of trinomials is to make them temporary!" Such vagaries are beyond criticism.

Mr. Seebohm's classification, as regards his subfamilies and genera, is simply unique — emphatically Seebohmian. He tells us that one of his objects in writing a book on Limicoline birds was to correct what appeared to him "to be errors in their classification," and to help clear up and set in order the 'chaos' of the present phase of the subject, consequent upon passing from "the artificial system of the last century to the natural system, which may possibly be discovered in the next." A glance at his 'Systematic Index and Diagnoses' (pp. xv-xxviii) is sufficient to show that a more arbitrary or 'artificial' system would be hard to find. The absence or presence of a membrane connecting the base of the toes, or the situation of the nostril in the basal fourth of the bill or beyond it, determine alike the composition of his 'subfamilies' and the relationship of his genera,—characters of, at best, exceedingly slight importance, and variable in even strictly congeneric species, otherwise most closely allied. Such superficial characters being allowed to outweigh others of much greater importance, including those more or less affecting the general structure and habits of the species, it is not surprising that *Hæmatopus* is placed in his subfamily 'Totaninæ,' and *Strepsilas* in his subfamily Scolopacinæ, next to *Tringa*. As consistency is not one of Mr. Seebohm's leading characteristics, it is quite natural to read, in the face of this arrangement, "The Turnstones are so nearly allied to the Plovers that it is doubtful whether they ought to be separated from them" (p. 407). We find the Turnstones, however, separated from the Plovers, in Mr. Seebohm's book, by all of the strictly Totanine forms! The genera *Macrorhamphus* and *Micropulama* are included in his 'genus' *Ereunetes*!

A large part of the text is devoted to the geographical distribution of the species and higher groups, and to speculation as to their ancestral history and genetic relations. Many of his hypotheses are probable, though resting not unfrequently on a very airy groundwork. Mr. Seebohm evidently has not made himself thoroughly familiar with all that has been written by even the later and most trustworthy authorities on some of the points he treats with great positiveness, and did space permit it would be easy to give numerous instances of oversight or carelessness. The A. O. U. Check-List of North American Birds is cited as "Coues & Co. Check-List N. Amer. Birds,"—with just what intent is not obvious.

Mr. Seebohm's material for the basis of his work seems to have been extensive and of excellent quality, he having purchased for the purpose the well-known Harting, Shelley, and Swinhoe collections, and having had access to the resources of the British Museum. He recognizes 192 species and 40 subspecies, which he arranges in 19 genera and 3 subfamilies. Despite what we have felt called upon to say in criticism of the descriptive portion of the work, the author has brought together a vast

amount of thoroughly trustworthy and interesting information about the birds he treats, and the work will prove of great usefulness as a handbook for this extensive group of birds. We regret that certain idiosyncrasies of classification and nomenclature prevent our according to the work as a whole the same high praise we so gladly give to the introductory chapters, which show that his ideas on many points have wonderfully clarified since he wrote the 'Introduction' to his 'History of British Birds,' some five years ago.—J. A. A.

Ridgway on New or Little-known American Birds.—In the 'Proceedings' of the U. S. National Museum, Mr. Ridgway has published during the last few months descriptions of a number of new species and subspecies of American birds, with notes on others little known, as follows :

(1) *Cotinga ridgwayi* Zeledon MS., from Western Costa Rica.* The species is allied to *C. amabilis*, of which it is the western representative. (2) *Spindalis zena townsendi*,† from Abaco Island, Bahamas, collected by Mr. Charles W. Townsend. (3) He has also described the female of *Carpodectes antoniae* Zeledon.‡ (4) *Porzana alfari*,§ from Costa Rica, allied to *C. albigularis* Lawr. (5) *Callipepla elegans bensoni* from Campos, Sonora.|| based on five specimens collected by Lieut. H. C. Benson, U. S. A. (6) *Picolaptes rikeri* Ridgw. is made the type of a new genus *Berlepschia*.¶ (7) *Phacellodomus inornatus* from Venezuela,** and allied to *P. frontalis*. (8) *Megascops vermiculatus*, from Costa Rica, and *Megascops hastatus*, from Mazatlan.†† (9) *Muscisaxicola occipitalis*, from Lake Titicaca, Peru.‡‡ (10) In a paper on *Phrygilus gayi* and allied species, §§ *P. punensis* is described as new, and *P. atriceps*, *P. gayi*, and *P. formosus* are discussed at length, each being described in detail. He endeavors to show "that *Emberiza aldunatei* Gay is a pure synonym of *Fringilla gayi* Eyd. & Gerv., and that *Phry-*

* Description of a New Species of *Cotinga* from the Pacific Coast of Costa Rica. By Robert Ridgway. Proc. U. S. Nat. Mus., 1887, pp. 1, 2 (April 25, 1887).

† Description of a New Form of *Spindalis zena* from the Bahamas. Ibid., p. 3.

‡ Description of the adult female of *Carpodectes antoniae* Zeledon; with critical remarks, notes on habits, etc., by José C. Zeledon. Ibid., p. 20 (April 25, 1887).

§ Description of a New Species of *Porzana* from Costa Rica. Ibid., p. 111.

|| Description of a new Plumed Partridge from Sonora. Ibid., pp. 148-150 (July 2, 1887).—No allusion is here made to its prior description in 'Forest and Stream' (Vol. XXVIII, No. 6, p. 106, March 3, 1887. See Auk, IV, p. 156, April, 1887).

¶ Description of a New Genus of Dendrocolaptine Bird from the Lower Amazon. Ibid., p. 151.

** Description of a New Species of *Phacellodomus* from Venezuela. Ibid., p. 152.

†† Description of two New Species of Kaup's Genus *Megascops*. Ibid., pp. 267, 268 (Aug. 1, 1887).

‡‡ Description of a New *Muscisaxicola* from Lake Titicaca, Peru. Ibid., p. 430 (Nov. 3, 1887).

§§ On *Phrygilus gayi* (Eyd. & Gerv.) and Allied Species. Ibid., pp. 431-435 (Nov. 3, 1887).